

drawing at least one of air from a treatment chamber and ambient air through a sorption column and thereafter guiding the air that has passed through the sorption column into a treatment chamber. Claim 9 recites that the sorption column contains a reversibly dehydratable material that operates to withdraw moisture from air during the passage of the air through the sorption column.

Claim 9 also recites a step of affecting desorption of the reversibly dehydratable material in the sorption column. Claim 9 recites drawing at least one of air from the treatment chamber and ambient air through the sorption column by means of an air accelerator means. Claim 9 also recites subjecting air passing through the sorption column to heating and guiding the air that has been heated as it passed through the sorption column into the treatment chamber, wherein the air which is guided into the treatment chamber heats at least one of the treatment liquid to be applied to items retained in the home appliance and the items themselves.

The Dinh reference discloses industrial dryer systems which operate in a closed looped fashion to remove moisture from items which are undergoing treatment. The Dinh dryer systems utilize heat pipes. The heat pipes absorb heat from warm, moisture laden air exiting a treatment chamber. The heat pipes operate to move the absorbed heat over to dehumidified air which is about to pass back into a treatment chamber. The removal of heat from the moisture laden air exiting the treatment chamber lowers the temperature of the air, which causes the moisture in the air to condense and flow out a drain as waste water.

The Dinh reference fails to disclose or suggest the use of a sorption column containing a reversible dehydratable material. Accordingly, Dinh necessarily fails to disclose or suggest methods that include drawing air through a sorption column such that a reversibly dehydratable material in the sorption column withdraws moisture from the air during its passage through the sorption column, as recited in claim 9. The Dinh reference also necessarily fails to disclose or suggest conducting any type of desorption step that would include

effecting desorption of a reversible dehydratable material in a sorption column, as also recited in claim 9. Because the Dinh reference fails to disclose or suggest these features of claim 9, it is respectfully submitted that claim 9 is allowable over Dinh. Claims 10-12 and 16-18 depend from claim 9 and are allowable for the same reasons, and for the additional features which they recite.

**II. Claims 13-15**

The Office Action rejects claims 13-15 under 35 U.S.C. §103(a) over Dinh, in view of US Patent No. 3,034,221 to Tuck (hereinafter "Tuck"). The rejection is respectfully traversed.

Claims 13-15 depend from claim 9 and are allowable over Dinh for all the reasons discussed above in connection with claim 9, and for the additional features which they recite.

Although the Office Action never specifically state this, it appears that the Examiner is taking the position that one of ordinary skill in the art, viewing Dinh and Tuck, would have been motivated to modify Dinh so that Dinh performs a method as recited in claims 13-15. Applicants respectfully disagree.

Claim 9, from which claims 13-15 depend, recites that during a desorption step, air that has been heated as it passes through the sorption column is guided into the treatment chamber to heat at least one of the treatment liquid to be applied to items retained in the home appliance and the items themselves. Thus, this heat is not lost to the atmosphere.

The Tuck reference discloses a device which can be used to effect drying of items. Tuck teaches that a reversible dehydratable material can be used to absorb moisture from air leaving a treatment chamber. However, in contrast to what is recited in claim 9, Tuck teaches that during a desorption step, the reversibly dehydratable material should be heated, and air passing over the reversibly dehydratable material (to absorb moisture from the reversibly dehydratable material) should be vented to the atmosphere. Because the air

passing over the reversibly dehydratable material is vented to the atmosphere, the heat energy used to effect the desorption is lost. Thus, Tuck teaches away from the method recited in claim 9.

In order to arrive at a method as recited in claim 9, Dinh must be modified so that Dinh (1) uses a reversibly dehydratable material to remove moisture from air leaving a treatment chamber during a drying step, and (2) so that during a desorption step, air is passed over the reversibly dehydratable material to heat the air, and the air is then guided back into the treatment chamber. The Examiner does not provide any reason why one of ordinary skill in the art would have made these modifications to Dinh. And, in fact, it is respectfully submitted that one of ordinary skill in the art absolutely would not have modified the Dinh reference in this fashion.

The Dinh industrial dryers are configured to recirculate air during a drying process. The air is heated and guided into the treatment chamber, where it absorbs moisture. Moisture laden air exiting the treatment chamber is cooled so that the moisture will condense out, and the air is then re-heated and returned back into the treatment chamber.

One of ordinary skill in the art would never have modified the Dinh system such that air being returned into the treatment chamber is first passed through a sorption column during a desorption step. Doing so might result in heating of the air. But doing so would also result in moisture emitted from the reversibly dehydratable material being put into the air just before the air is sent into the treatment chamber. The last thing that one of skill in the art would do is add moisture to the air just before it is sent into the treatment chamber. Doing so would be completely counter-productive. Instead, to the extent one of ordinary skill in the art decided to incorporate a reversibly dehydratable material in Dinh's system, one of skill in the art would operate the system just like is taught in Tuck. Any air used for desorption would be vented to the atmosphere, not back into the treatment chamber.

In summary, none of the references teach or suggest a desorption step as recited in claim 9, where air passing through a sorption column during the desorption step is guided into a treatment chamber. Also, Tuck teaches away from this sort of desorption step, as Tuck teaches that air used for desorption should be vented to the atmosphere. Further, one of ordinary skill in the art would never have modified Dinh to perform a desorption step as recited in claim 9, because doing so would severely impair the efficiency of Dinh's system. For all these reasons, it is respectfully submitted that the references cannot be combined as asserted in the Office Action to render claim 9, or claims 13-15 obvious.

It is further respectfully submitted that it requires the impermissible use of hindsight, in view of Applicant's invention, to find a motivation to selectively combine the references such that the result is a method as recited in claim 9, or claims 13-15.

For all the above reasons, withdrawal of the rejection of claims 13-15 is respectfully requested.

### **III. Claim 19**

The Office Action rejects claim 19 under 35 U.S.C. §103(a) over Dinh, in view of US Patent No. 2,633,928 to Chamberlain (hereinafter "Chamberlain"). The rejection is respectfully traversed.

Independent claim 19 is directed to a method for operating a dishwasher. Claim 19 recites subjecting crockery retained in the dishwasher to a drying step after the crockery has undergone a treatment step, as a result of which moisture remains on the crockery. Claim 19 recites that the drying step includes drawing at least one of air from a treatment chamber and ambient air through a sorption column and thereafter guiding the air that has passed through the sorption column into a treatment chamber, the sorption column containing reversibly

dehydratable material that operates to withdraw moisture from air during the passage of the air through the sorption column.

Claim 19 further recites effecting desorption of the reversible dehydratable material in the sorption column via drawing at least one of air from the treatment chamber and ambient air through the sorption column by means of an air accelerator means. Claim 19 further recites subjecting air passing through the sorption column to heating, and guiding the air that has been heated as it passed through the sorption column into the treatment chamber, wherein the air guided into the treatment chamber heats at least one of the treatment liquids to be applied to the crockery retained in the device and the crockery itself.

As explained above, the Dinh reference fails to disclose or suggest any methods that utilize a reversibly dehydratable material in a sorption column. Thus, claim 19 is allowable over Dinh.

The Chamberlin reference discloses the use of a reversibly dehydratable material to assist in removing moisture from air leaving a treatment chamber. However, just like Tuck, Chamberlain teaches that air used to conduct a desorption step should be vented to the atmosphere, not guided back into the treatment chamber. Thus, like Tuck, Chamberlain teaches away from a method as recited in claim 19.

It is respectfully submitted that Chamberlain also provides no teaching or suggestion that would have motivated one of ordinary skill in the art to modify Dinh so that Dinh's system would perform a method as recited in claim 19. Virtually all of the arguments presented above in connection with the combination of Dinh and Tuck also apply to the combination of Dinh and Chamberlain. Thus, for all the reasons explained above, it is respectfully submitted that the combination of Dinh and Chamberlain is also improper. Withdrawal of the rejection of claim 19 is also respectfully requested.

**IV. Conclusion**

In view of the foregoing, withdrawal of all of the rejections and allowance of Claims 9-19 are respectfully requested. If the Examiner has any questions regarding this Response, the Examiner is requested to contact the undersigned. If an extension of time for this paper is required, petition for extension is herewith made.

Respectfully submitted,

/Andre Pallapies/

Andre Pallapies  
Registration No. 62,246  
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BSH Home Appliances Corporation  
100 Bosch Blvd.  
New Bern, NC 28562  
Phone: 252-672-7927  
Fax: 714-845-2807  
andre.pallapies@bshg.com